

## Case 2988

***Euchroeus* Latreille, 1809 and *Chrysis purpurata* Fabricius, 1787 (currently *E. purpuratus*) (Insecta, Hymenoptera): proposed conservation of usage; and *Chrysis gloriosa* Fabricius, 1793: proposed suppression of the specific name**

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**Abstract.** The main purpose of this application is to conserve the name *Euchroeus* Latreille, 1809 for a genus of parasitic cuckoo wasps (family CHRYSIDIDAE), and the specific name of its type species *Chrysis purpurata* Fabricius, 1787. These long used names are threatened by a lectotype designation for *C. purpurata* by L.S. Kimsey (1988): the specimen designated is one of *C. iris* Christ, 1791, and the designation would not only displace the name *iris* but would make *Euchroeus* a junior synonym of *Chrysis* Linnaeus, 1761. The specimen does not accord with the description of *C. purpurata* and it was probably not a syntype; it is proposed that the designation be set aside. A second purpose is the suppression of the specific name of *Chrysis gloriosa* Fabricius, 1793, a name which has long been misidentified as a senior synonym of *Holopyga amoenula* Dahlbom, 1845 (the type species of *Holopyga*). Another erroneous lectotype designation by Kimsey would make it a junior synonym of *Pseudomalus auratus* (Linnaeus, 1761); since *gloriosa* is in fact probably a senior synonym of a widely used name in some other genus its suppression is proposed.

**Keywords.** Nomenclature; taxonomy; Hymenoptera; cuckoo wasps; CHRYSIDIDAE; *Euchroeus*; *Euchroeus purpuratus*; *Chrysis gloriosa*; *Holopyga gloriosa*.

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1. Fabricius (1787, p. 283) described a European cuckoo wasp species as *Chrysis purpurata*. He repeated the description in 1793 (p. 240).

2. Some years later Fabricius (1804, p. 172) again described *C. purpurata*, but there were several differences from the texts of 1787 and 1793; for example, 'anus serratus' [tergum III serrated] had become 'anus quadridentatus' [tergum III with four teeth]. These differences suggest that the 1804 description actually applied to a different species.

3. Lepeletier (1806, p. 125) remarked on the differences between the descriptions of *C. purpurata* given by Fabricius in 1787 (and 1793) and in 1804: 'Nous prions M. Fabricius de nous dire si la *chrysis purpurata* de son syst. piezat. [1804] qui a l'extrémité quadridentée, d'après la description, est la même que la nôtre et celui de son ent. syst. [1793] qui a cette même extrémité dentée en scie'.

4. In 1805 Latreille (p. 238) referred to *C. purpurata*; he noted that it had 'son extrémité postérieure d'un rouge pourpre; anus ayant un grand nombre de denticules'. This corresponds to the 1787 and 1793 description by Fabricius but not that of 1804. Four years later he (Latreille, 1809, p. 49) established the nominal genus *Euchroeus* with *C. purpurata* as the only species; the description of the genus noted 'Abdomen postice serratum, dentibus numerosis'. *E. purpuratus* (Fabricius, 1787) is very clearly defined by the original description and is unmistakable, and the genus *Euchroeus* has been accepted by numerous subsequent authors (e.g. Dahlbom, 1854; Trautmann, 1927; Linsenmaier, 1951, 1959, 1968; Kimsey, 1983; the Commission Secretariat has a list of 18 references). *Euchroeus* has also been used as the basis of family-group names (see Dahlbom, 1854, p. 361; Bohart & Kimsey, 1982, p. 198; Kimsey, 1983). Despite the action of Kimsey (1988; see para. 5 below), Pagliano & Scaramozzino (1990) and others have maintained existing usage; Strumia (1995) applied Article 80 of the Code when doing so.

5. Kimsey (1988) studied the specimens of CHRYSIDIDAE now in the Fabrician collections of the Zoologisk Museum in Copenhagen and found that the three existing specimens (originally in Kiel; see Zimsen, 1964, p. 382) labelled *C. purpurata* do not belong to the species called *Euchroeus purpuratus* by Latreille (1809) and universally by all subsequent authors (i.e. they do not match the original (1787) description of *C. purpurata*). Instead, they belong to the species *Chrysis iris* Christ, 1791 (a true *Chrysis*, of the *C. ignita* group of species). Despite this discrepancy Kimsey (p. 272) designated one of these specimens as lectotype of *C. purpurata*; this action of transferring the name *purpurata* to another taxon made *C. iris* Christ, 1791 a junior synonym of *C. purpurata* Fabricius, 1787 and, as she noted, made *Euchroeus* a junior synonym of *Chrysis* Linnaeus, 1761 (type species *Sphex ignita* Linnaeus, 1758 by designation by Latreille in 1810).

6. If Kimsey's lectotype designation were accepted the valid name of the genus known as *Euchroeus* since 1809 would be (as she said) *Brugnoia* Radoszkowski, 1877 (p. 26), of which the Asian species *B. pellucida* was the type by monotypy, and the valid name for *E. purpurata* auct. would be the new combination *B. quadrata* (Shuckard, 1836, p. 169; originally *Euchroeus quadratus*). Kimsey admitted (p. 273) that 'some argument could be made [sic] for conserving the name *Euchroeus*', but she asserted that 'this is a relatively rare group of species ... which has never had a major revision'. This last statement is not justified; for example Linsenmaier (1951 (pp. 26-34), 1959 (pp. 64-74), 1968 (pp. 38-54)) treated *Euchroeus* at length. Kimsey maintained her new scheme of nomenclature in Kimsey & Bohart (1990, p. 294).

7. Zimsen (1964) has recounted the history of Fabrician material. In 1798-1804 Fabricius studied the large Sehestedt and Tønder-Lund collections in Copenhagen, and as a result these contained many Fabrician type specimens. These collections were united by N. Tønder-Lund, and after his death they were purchased by the Danish State; many of the specimens were dispersed elsewhere, and almost all of the original labels were replaced in the middle of the last century (Zimsen, 1964, p. 12). The Fabricius collection long preserved at Kiel was transferred to Copenhagen at the time of Zimsen's revision.

8. Dahlbom (1854, p. xvii) reported that in 1847, when he studied the Sehestedt & Tønder-Lund collection in Copenhagen, he found a specimen (or specimens) of '*Chrysis purpurea* [sic] = *Euchroeus* id. nob.'; this corresponds to the original and

current usage of *purpuratus*. In contrast to this, Dahlbom reported (pp. xix–xxi, 369) that the Kiel specimens labelled *C. purpurata* were different ('*C. purpurata* = *C. nitidula* nob.'): he mentioned that in these specimens the quadridentate tergum corresponded to *C. nitidula* (a name which in the sense of Dahlbom and others corresponded to *C. iris* Christ, 1791 and not to *C. nitidula* Fabricius, 1775).

9. The description of '*Chrysis purpurata*' by Fabricius in 1804 was presumably based at least in part on the *C. iris* specimens later seen in Kiel by Dahlbom and, following their transfer, in Copenhagen by Kimsey, whereas any Copenhagen specimens used by Fabricius in the original (1787) description were lost after Dahlbom's time. In any event, Kimsey's lectotype designation is very destabilising for the reasons given in paras. 5 and 6 above, and we propose that it should be set aside; there is no need for a neotype designation because, as mentioned in para. 4, the original and universally accepted [apart from Kimsey] meaning of *Euchroeus purpuratus* (Fabricius, 1787) is plain from the original description and has not been disputed. It is worth noting, however, that four female Latreille specimens in the Spinola collection (see Dahlbom, 1854, p. 369) are now in the Museo Regionale di Scienze Naturali in Turin, and one of these could if necessary be designated as a neotype.

10. We should like to draw attention to *Chrysis gloriosa*, a nominal species described by Fabricius (1793, p. 242) from specimen[s] in the Desfontaines collection (once in Paris but now lost; see Zimsen, 1964, p. 17) from 'Barbaria' [North Africa] and clearly distinguished by him from the European *C. aurata* Linnaeus, 1761 (now *Pseudomalus auratus*), which he identified correctly. This description was repeated by Coquebert (1801, p. 58), who gave a colour illustration (pl. 14, fig. 1) of a Paris specimen identified by Fabricius himself.

11. Dahlbom (1854, p. xvii) reported '*C. gloriosa* e Tanger Schousboe, forma aliena, non typica' in the Sehestedt collection in Copenhagen; this did not match the original Fabricius description and Dahlbom (p. 272) equated it with his own *C. schousboei*. In contrast, Dahlbom stated (pp. xix, xxii, 54) that in Kiel '*C. gloriosa*' was the name given to a variety of his own *Holopyga ovata*, and again this did not match the original description by Fabricius (1793).

12. The name *Holopyga gloriosa* (Fabricius, 1793) has long been used, although mistakenly, as the valid synonym (see for example Bischoff, 1913; Bodenstein, 1939, p. 128) of *H. amoemula* Dahlbom, 1845, which is the type species of *Holopyga* Dahlbom, 1845 by the subsequent designation of Ashmead in 1902.

13. *Holopyga ovata* Dahlbom and several other taxa have been treated as 'varieties' of *H. gloriosa*. Linsenmaier (1959) in his revision of the CHRYSIDIDAE recognized several species in the '*Holopyga gloriosa* complex', and gave to some of them names previously used for so-called varieties of *H. gloriosa*, but apparently without knowledge of relevant type specimens. The name *gloriosa* was ascribed to a still undescribed North African species differing from Dahlbom's account of the Kiel specimens.

14. Kimsey (1988, p. 272) reported that what she supposed (but see para. 10 above) to be the type of *Chrysis gloriosa*, now in Copenhagen but originally in Kiel (see Zimsen, 1964, p. 383), is a specimen of *Pseudomalus auratus* (Linnaeus, 1761). Although this species had been distinguished from *C. gloriosa* by Fabricius in 1793 (para. 10 above), Kimsey described the specimen as the holotype (which amounts to

a lectotype designation: Article 74b of the Code) and treated *H. gloriosa* as a junior synonym of *P. auratus*, and this was repeated by Kimsey & Bohart (1990).

15. The true identity of *C. gloriosa* cannot be determined from the description by Fabricius (1793) or the illustration by Coquebert (1801); these do not fit any *Holopyga* species, although they are strikingly like the well-known and unmistakable *Chrysurus purpureifrons* (Abeille, 1878). Certainly *C. gloriosa* was not the same as the interpretations by numerous authors since Dahlbom (*Holopyga amoenua* complex) or by Kimsey (*Pseudomalus auratus*). It has long been used in a mistaken sense in *Holopyga*, and since any eventual synonymization (e.g. by discovery of a true type specimen from the Desfontaines collection) would displace some generally accepted specific name we propose that the name *gloriosa* be suppressed except for purposes of homonymy.

16. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers:
  - (a) to set aside the lectotype designation by Kimsey (1988) for the nominal species *Chrysis purpurata* Fabricius, 1787;
  - (b) to suppress the name *gloriosa* Fabricius, 1793, as published in the binomen *Chrysis gloriosa*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Euchroeus* Latreille, 1809 (gender: masculine), type species by monotypy *Chrysis purpurata* Fabricius, 1787;
- (3) to place on the Official List of Specific Names in Zoology the name *purpurata* Fabricius, 1787, as published in the binomen *Chrysis purpurata* (specific name of the type species of *Euchroeus* Latreille, 1809);
- (4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *gloriosa* Fabricius, 1793, as published in the binomen *Chrysis gloriosa* and as suppressed in (1)(b) above.

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